Sanitary Circulator Pumps
Recirculation pumps for heating and cooling
NOW.

HIGH EFFICIENCY SOLUTIONS FOR INDOOR CLIMATES

Wilo is a premium supplier for building services, water management and industrial applications. We make complex technologies user-friendly, simple to use, energy-efficient and high-performance. At the end of the day, the main focus of everything we do is people. We offer them outstanding products, system solutions and services.

Founded in Dortmund in 1872 as a factory for copper and brass goods, Wilo has evolved from being a local specialist to a global player in the course of its long and successful history. We are well-acquainted with the issues that will shape our future and we are developing technologies to address them. Global mega-trends are having a profound and lasting impact on our lives. As we address these trends, we focus on globalisation, urbanisation, climate change, energy scarcity, water shortage as well as technological progress and digitalisation – important issues for your day-to-day work. And this makes them important to us as well.
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EFFICIENT, HIGH-TECHNOLOGY HVAC SOLUTIONS

Pumps & systems for heating, air conditioning, cooling and domestic hot water
EFFICIENT AIR CONDITIONING
Large buildings that house a variety of applications require highly sophisticated technology and intelligent networking. The German Football Museum in Dortmund is a prime example. In addition to the exhibition areas, the building contains a multifunctional arena, several dining areas and a separate floor for events, together extending over 7,700 square metres. The imposing glass front often serves as a canvas for multimedia images and therefore must remain free of condensation. Optimal air conditioning is provided by 21 highly efficient circulators, fully controlled by the building management system. These Wilo pumps ensure resource-efficient operation while maximising potential savings.

VERSATILE
Our solutions make it possible to supply various types of buildings with a pleasant indoor climate and domestic hot water. From single-family houses to rental, administrative and commercial properties such as hospitals, office spaces or hotels.
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
</tr>
<tr>
<td>Industrial Processes</td>
<td></td>
</tr>
<tr>
<td>Industrial Circulation</td>
<td></td>
</tr>
<tr>
<td>Booster</td>
<td></td>
</tr>
<tr>
<td>Boiler heating</td>
<td></td>
</tr>
<tr>
<td>Sanitary hot water</td>
<td></td>
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<tr>
<td>Solar Heating</td>
<td></td>
</tr>
<tr>
<td>Underfloor heating</td>
<td></td>
</tr>
<tr>
<td>Geothermal heating</td>
<td></td>
</tr>
<tr>
<td>Cold water system</td>
<td></td>
</tr>
<tr>
<td>Air Conditioning</td>
<td></td>
</tr>
<tr>
<td>Closed cold circuit</td>
<td></td>
</tr>
</tbody>
</table>

Grundfos Equivalent replacement models are intended as a guide only. Refer to manufacturer literature for full technical specifications.
Providing high-efficiency, tailored HVAC solutions in Australia and New Zealand
Sanitary Circulator Pumps
Wilo-Star-Z NOVA  Sanitary hot water circulation pump

Design type
Glandless circulation pump with screwed connection and blocking-current proof synchronous motor

Application
Domestic hot water circulation systems in industry and building services

Type key
Example: Wilo-Star-Z NOVA
Star-Z Domestic hot water circulation pump, glandless pump
NOVA Type designation
A with ball shut-off valve and non-return valve
B with ball shut-off valve, non-return valve and plug-in time switch
T

Special features/product advantages
→ Low power consumption of just 3 to 5 W thanks to synchronous motor
→ Extended field of application for hard water: up to 3.57mmol/l (20 °dH)
→ Quick, toolless electrical connection thanks to the Wilo-Connector
→ Reliable protection from bacteria and corrosion due to the use of high-quality materials for a longer service life
→ Flexible service motor: fast replacement of all common pump types

Technical Data
<table>
<thead>
<tr>
<th>Permissible area of application</th>
<th>+2 °C to +110 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible temperature range - Heating</td>
<td>up to 20 °dH: max. +65°C, in short-time duty (2 h) up to +70°C</td>
</tr>
<tr>
<td>Mains connection</td>
<td>1-230 V, 50/60 Hz</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 42</td>
</tr>
<tr>
<td>Screwed connection or flange connection</td>
<td>Rp ½</td>
</tr>
<tr>
<td>Max. operating pressure, standard version</td>
<td>10 bar</td>
</tr>
</tbody>
</table>

Materials
<table>
<thead>
<tr>
<th>Pump housing</th>
<th>Brass (CuZn40Pb2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impeller</td>
<td>E Plastic (PPO)</td>
</tr>
<tr>
<td>Shaft</td>
<td>Ceramic</td>
</tr>
<tr>
<td>Bearing</td>
<td>Carbon, synthetic resin impregnated</td>
</tr>
</tbody>
</table>
**Automatic functions**
- Time switching function for programming of 3 switch-on or switch-off times (Z 15 TT only)
- Temperature control for maintaining a constant return temperature in the domestic hot water circulation system (Z 15 TT only)
- Thermal disinfection routine (detection and support of thermal disinfection of the domestic hot water tank) (only Z 15 TT)
- Blocking protection (Z 15 TT only)

**Signal and display functions**
LCD screen for display of pump data and fault codes (Z 15 TT only)

**Equipment**
- Quick electrical connection with Wilo-Connector
- Integrated ball shut-off valve on the suction side (Star-Z NOVA A, Star-Z-NOVA C only)
- Integrated non-return valve on the pressure side (Star-Z NOVA A, Star-Z-NOVA C only)
- Blocking current-proof motor
- Plug-in time switch (only Star-Z NOVA C)
- 1.8 m connecting cable with shock-proof plug (only Star-Z NOVA C)
- Thermal insulation as standard

### Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe</th>
<th>Overall Length</th>
<th>Mains Connection</th>
<th>Max. Volume Flow</th>
<th>Max. Delivery Head</th>
<th>Thread</th>
<th>Rated Pressure</th>
<th>Grundfos Equivalent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star-Z NOVA 1</td>
<td>1/2”</td>
<td>84mm</td>
<td>1~ 230V 50 Hz</td>
<td>7.4 lpm</td>
<td>1 m</td>
<td>G 1</td>
<td>10 bar</td>
<td></td>
</tr>
<tr>
<td>Star-Z NOVA T</td>
<td>1/2”</td>
<td>138mm</td>
<td>1~ 230V 50 Hz</td>
<td>6.7 lpm</td>
<td>1 m</td>
<td>G 1</td>
<td>10 bar</td>
<td>COMFORT 15-14</td>
</tr>
</tbody>
</table>
Wilo-Stratos PICO-Z  Stainless steel high-efficiency circulator pump

Design type
Glandless circulation pump with screwed connection, blocking-current proof EC motor and integrated electronic power control.

Application
Sanitary water circulation systems in the industry and building services.

Type key
Example: Wilo-Stratos PICO-Z 20/1-4
Stratos PICO  High-efficiency pump (screw-end pump), electronically controlled
Z  Sanitary hot water circulation
20/  Nominal connection diameter
1-4  Nominal delivery head range [m]

Technical Data

<table>
<thead>
<tr>
<th>Permissible area of application</th>
<th>Permissible temperature range – Heating</th>
<th>Permissible temperature range – Drinking</th>
<th>Mains connection</th>
<th>Protection class</th>
<th>Threaded connection</th>
<th>Max. operating pressure, standard version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 3.57 mmol/l (20 °dH): +2 °C to +70 °C in short-time duty (4 h): +2 °C to +75 °C</td>
<td>N/A</td>
<td>1~230 V, 50 Hz</td>
<td>IP X4D</td>
<td>Rp ¾ and Rp 1</td>
<td>10 bar</td>
</tr>
</tbody>
</table>

Special features/product advantages
- Stainless steel design suitable for potable water application
- Constant pressure or temperature control modes available
- Displays current power consumption and cumulative kilowatt hours
- Suitable for retrofitting out asynchronous circulator pumps
- Both models 1~230V 50Hz – fitted with Australian lead and plug for immediate connection

Technical Data

<table>
<thead>
<tr>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump housing</td>
</tr>
<tr>
<td>Impeller</td>
</tr>
<tr>
<td>Shaft</td>
</tr>
<tr>
<td>Bearing</td>
</tr>
</tbody>
</table>
Operating modes
→ Δ p-c for constant differential pressure
→ Temperature-controlled mode

Manual functions
→ Setting the operating mode
→ Setting of pump output (delivery head)
→ Setting the minimum temperature
→ Setting of the minimum flow
→ Reset function for resetting the electricity meter
→ Reset function for resetting to factory settings
→ “Hold” function (key lock) for disabling the settings

Automatic functions
→ Infinitely variable power adjustment according to the operating mode
→ Temperature control for maintaining a constant return temperature in the domestic hot water circulation system
→ Thermal disinfection routine (detecting and supporting the thermal disinfection of the domestic hot water storage tank)
→ Automatic deblocking function

Signal and display functions
→ Display of the current power consumption in W
→ Display of the cumulative kilowatt hours in kWh
→ Display of effective flow in m³/h
→ Display of the current temperature in °C
→ Indication of fault signals (error codes)

Equipment
→ Wrench attachment point on pump body
→ Quick electrical connection with Wilo-Connector
→ Blocking–current proof motor
→ Particle filter
→ Thermal insulation as standard

Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe</th>
<th>Overall Length</th>
<th>Mains Connection</th>
<th>Max. Volume Flow</th>
<th>Max. Delivery Head</th>
<th>Thread</th>
<th>Rated Pressure</th>
<th>Grundfos Equivalent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratos-PICO-Z 20/1-6</td>
<td>1/4”</td>
<td>150 mm</td>
<td>1–230 V, 50 Hz</td>
<td>58 lpm</td>
<td>6 m</td>
<td>G 1¼</td>
<td>10 bar</td>
<td>ALPHA1 20–60</td>
</tr>
<tr>
<td>Stratos-PICO-Z 25/1-6</td>
<td>1”</td>
<td>180 mm</td>
<td>1–230 V, 50 Hz</td>
<td>58 lpm</td>
<td>6 m</td>
<td>G 1½</td>
<td>10 bar</td>
<td>ALPHA1 25–60</td>
</tr>
</tbody>
</table>
Wilo–Yonos MAXO Z

**High EC motor with automatic power adjustment**

**Design type**
Glandless circulator with threaded connection or flange connection, EC motor with automatic power adjustment.

**Application**
Domestic hot water circulation systems in industry and building services.

**Type key**
Example: Wilo–Yonos MAXO-Z 30/0.5-12
- **Yonos MAXO**
  - High-efficiency pump (screw-end or flange-end pump), electronically controlled
- **Z**
  - Single pump for domestic hot water circulation
- **30/0.5-12**
  - Nominal connection diameter
  - Nominal delivery head range [m]

**Special features/product advantages**
- High drinking water hygiene ensured through collective fault signal
- Energy-saving due to high-efficiency hydraulics and synchronous motor
- Complete transparency of the delivery head, speed and possible faults thanks to its LED display
- Simple adjustment over three speed stages using the green Knob when replacing an uncontrolled standard pump
- Easier electrical connection thanks to the Wilo-Plug
- Compact design and proven user-friendliness

### Technical Data

**Permissible area of application**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible temperature range – Heating</td>
<td>-10 °C to +110 °C</td>
</tr>
<tr>
<td>Permissible temperature range – Drinking</td>
<td>up to 3.57 mmol/l (20 °dH): 0 °C to +80 °C</td>
</tr>
<tr>
<td>Mains connection</td>
<td>1~230 V, 50 Hz</td>
</tr>
<tr>
<td>Protection class</td>
<td>IPX4D</td>
</tr>
<tr>
<td>Screwed connection or flange connection</td>
<td>(depending on type) Rp 1 to DN 65</td>
</tr>
<tr>
<td>Max. operating pressure, standard version</td>
<td>6/10 bar (special version: 16 bar)</td>
</tr>
</tbody>
</table>

**Materials**

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump housing</td>
<td>Pump housing made of red brass</td>
</tr>
<tr>
<td>Impeller</td>
<td>Plastic</td>
</tr>
<tr>
<td>Shaft</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Bearing</td>
<td>Carbon</td>
</tr>
</tbody>
</table>
Operating modes
→ Δp-c for constant differential pressure
→ Δp-v for variable differential pressure
→ n = constant (3 speed stages)

Manual functions
→ Setting the operating mode
→ Setting of pump output (delivery head)
→ Setting the speed stages

Automatic functions
→ Infinitely variable power adjustment according to the operating mode
→ Deblocking function
→ Soft start
→ Integrated full motor protection

Signal and display functions
→ Collective fault signal (potential-free NC contact)
→ Fault signal light
→ LED segment display for displaying the delivery head and error codes
→ Display of the configured speed stage (C1, C2 or C3)

Equipment
→ Quick electrical connection with Wilo plug. For the connection of the mains and SSM lines, with integrated strain relief
→ For flange–end pumps: Flange versions
→ Standard version for DN 40 to DN 65 pumps: Combination flange PN 6/10 for counter flanges PN 6 and PN 10

Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe</th>
<th>Overall Length</th>
<th>Mains Connection</th>
<th>Max. Volume Flow</th>
<th>Max. Delivery Head</th>
<th>Thread</th>
<th>Rated Pressure</th>
<th>Grundfos Equivalent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yonos MAXO-Z 25/0,5–10</td>
<td>1&quot;</td>
<td>180 mm</td>
<td>1–230 V, 50 Hz</td>
<td>171 lpm</td>
<td>11 m</td>
<td>G 1½</td>
<td>10 bar</td>
<td>MAGNA1 25–80</td>
</tr>
<tr>
<td>Yonos MAXO-Z 30/0,5–12</td>
<td>1 1/4&quot;</td>
<td>180 mm</td>
<td>1–230 V, 50 Hz</td>
<td>200 lpm</td>
<td>12 m</td>
<td>G 2</td>
<td>10 bar</td>
<td>MAGNA1 32–100</td>
</tr>
</tbody>
</table>
Wilo-Stratos-Z  

**High-efficiency bronze circulation pump**

**Design type**

Glandless circulation pump with screwed connection, blocking-current proof EC motor and integrated electronic power control.

**Application**

Sanitary water circulation systems in the industry and building services.

**Type key**

Example: Wilo-Stratos-Z 25/1-8

- **Stratos**: High-efficiency pump (screw-end or flange-end pump), electronically controlled
- **Z**: Single pump for domestic hot water circulation
- **25/1-8**: Nominal connection diameter [m]

**Technical Data**

**Permissible area of application**

- Permissible temperature range – Heating: \(-10 \, ^\circ \text{C} \text{ to } +110 \, ^\circ \text{C}\)
- Permissible temperature range – Drinking: \(-10 \, ^\circ \text{C} \text{ to } +110 \, ^\circ \text{C}\)
- Mains connection: 1~230 V, 50/60 Hz
- Protection class: IP X4D
- Screwed connection or flange connection: (depending on type) Rp 1 to DN 65
- Max. operating pressure, standard version: standard version: 6/10 bar (special version: 16 bar)

**Special features/product advantages**

- Energy savings through greater system efficiency with the Q–Limit function (volume flow limiter)
- Constant pressure, variable pressure or temperature control modes available
- Modular concept for connection of all conventional bus systems (e.g. Modbus, BACnet etc)
- Corrosion resistant pump housing
- Full motor protection with integrated trip electronics

**Signal and display functions**

- Collective fault signal (potential-free NC contact)
- Individual run signal (potential-free NO contact) (possible with Stratos IF-Modules)
- Fault signal light
- LCD display for indication of pump data and fault codes

**Materials**

- **Pump housing**: Red brass
- **Impeller**: Plastic
- **Shaft**: Stainless steel
- **Bearing**: Carbon, synthetic resin impregnated
Operating modes
- Manual control mode (n=constant)
- Δp–c for constant differential pressure
- Δp–v for variable differential pressure
- Δp–T for temperature-controlled differential pressure (programmable via IR–Stick, IR–Monitor, Modbus, BACnet, LON or CAN)
- Q limit for limiting the maximum volume flow (setting only via IR–stick)

Manual functions
- Setting the operating mode
- Differential pressure setpoint setting
- Setting automatic setback operation
- Setting the pump ON/OFF
- Setting the speed (manual control mode)

Automatic functions
- Infinitely variable power adjustment according to the operating mode
- Automatic setback operation
- Deblocking function
- Soft start
- Full motor protection with integrated trip electronics

External control functions
- “Overriding Off” control input (possible with Stratos IF–Modules)
- “Overriding Min” control input (possible with Stratos IF–Modules)
- “Analogue In 0 – 10 V” control input (remote speed adjustment) (possible with Stratos IF–Modules)
- “Analogue In 0 – 10 V” control input (remote setpoint adjustment) (possible with Stratos IF–Modules)

Data exchange
- Infrared interface for wireless data exchange with IR–Stick/IR–Monitor
- Modbus RTU serial digital interface for connection to building automation BA via RS485 BUS system (possible with Stratos IF–Modules)
- BACnet serial digital interface MS/TP slave for connection to building automation BA via RS485 BUS system (possible with Stratos IF–Modules)
- CAN serial digital interface for connection to building automation BA via CAN BUS system (possible with Stratos IF–Modules)
- LON serial digital interface for connection to a LONWorks network (possible with Stratos IF–Modules)
- PLR serial digital interface for connection to BA via Wilo interface converter or company–specific coupling modules (possible with Stratos IF–Modules)
- Dual pump management (double pump or 2 x single pumps)
- Main/standby operation (automatic fault–actuated switchover/time–dependent pump cycling): various combinations with Stratos IF–Modules (accessories) possible
- Parallel operation (efficiency–optimised peak load activation and deactivation): various combinations with Stratos IF–Modules (accessories) possible

Technical Data

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<tr>
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<th>Pipe</th>
<th>Overall Length</th>
<th>Mains Connection</th>
<th>Max. Volume Flow</th>
<th>Max. Delivery Head</th>
<th>Thread</th>
<th>Rated Pressure</th>
<th>Grundfos Equivalent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratos-Z 25/1-8</td>
<td>1&quot;</td>
<td>180</td>
<td>1–230V 50Hz</td>
<td>123 lpm</td>
<td>8 m</td>
<td>G 1½</td>
<td>16 bar</td>
<td>MAGNA3 25–80N</td>
</tr>
<tr>
<td>Stratos-Z 30/1-12</td>
<td>1 1/4</td>
<td>180</td>
<td>1–230V 50Hz</td>
<td>177 lpm</td>
<td>12 m</td>
<td>G 2</td>
<td>16 bar</td>
<td>MAGNA3 32–100N</td>
</tr>
<tr>
<td>Stratos-Z 40/1-12</td>
<td>1 1/4</td>
<td>250</td>
<td>1–230V 50Hz</td>
<td>376 lpm</td>
<td>12 m</td>
<td>DN 40</td>
<td>16 bar</td>
<td>MAGNA3 40–120N</td>
</tr>
</tbody>
</table>
**Wilo-Star-Z**  Sanitary hot water circulation pump

**Design type**
Glandless circulator with screwed connection

**Application**
Sanitary hot water circulation systems in the industry and building services.

**Type key**
Example: **Wilo-Star-Z 20/7-3**
- **Star**: Standard pump
- **Z**: Circulator
- **20/**: Nominal connection diameter
- **7-3**: Nominal delivery head [m]

**Special features/product advantages**
- Star-Z 20/7–3 features sanitary stainless steel pump housing – AS4020 Certified
- Star Z 25/6–3 supplied with bronze housing
- AC pumps with electrical quick connection
- All plastic parts that come into contact with the fluid fulfil KTW recommendations

### Technical Data

<table>
<thead>
<tr>
<th>Permissible area of application</th>
<th>Permissible temperature range – Heating</th>
<th>+2 °C to +110 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible temperature range – Drinking</td>
<td>+ up to 3.21 mmol/l (18 °dH): max. +65 °C, in short-time duty (2 h) up to +70 °C</td>
<td></td>
</tr>
<tr>
<td>Mains connection</td>
<td>1<del>230 V, 50 Hz, or 3</del>400 V, 50 Hz for the Star-Z 25/2 DM</td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP44</td>
<td></td>
</tr>
<tr>
<td>Screwed connection or flange connection</td>
<td>Rp ¾ and Rp 1</td>
<td></td>
</tr>
<tr>
<td>Max. operating pressure, standard version</td>
<td>10 bar</td>
<td></td>
</tr>
</tbody>
</table>

**Materials**
- **Pump housing**: Bronze, stainless steel
- **Impeller**: Plastic
- **Shaft**: Ceramic
- **Bearing**: Carbon, synthetic resin-impregnated
Operating modes

- Speed stage switching

Manual functions

- Setting of the speed stages (3 speed stages with Star-Z-3 pumps)

Automatic functions

- Time switching function for programming of 3 switch-on or switch-off times (Z 15 TT only)
- Temperature control for maintaining a constant return temperature in the domestic hot water circulation system (Z 15 TT only)
- Thermal disinfection routine (detection and support of thermal disinfection of the domestic hot water tank) (only Z 15 TT)
- Blocking protection (Z 15 TT only)

Signal and display functions

- LCD screen for display of pump data and fault codes (Z 15 TT only)

Equipment

- Wrench attachment point on the pump body (Star-Z 25 only)
- Cable inlet possible from both sides (Star-Z 20/..., Star-Z 25/... only)
- Quick connection with spring clips
- Blocking-current proof motor

### Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe</th>
<th>Overall Length</th>
<th>Mains Connection</th>
<th>Max. Volume Flow</th>
<th>Max. Delivery Head</th>
<th>Thread</th>
<th>Rated Pressure</th>
<th>Grundfos Equivalent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star-Z 20/7-3</td>
<td>3⁄4&quot;</td>
<td>150mm</td>
<td>1~ 230V 50 Hz</td>
<td>91 lpm</td>
<td>6 m</td>
<td>G 1½</td>
<td>10 bar</td>
<td>UPS20-60N</td>
</tr>
<tr>
<td>Star-Z 25/6-3</td>
<td>1&quot;</td>
<td>180mm</td>
<td>1~ 230V 50 Hz</td>
<td>80 lpm</td>
<td>6 m</td>
<td>G 1½</td>
<td>10 bar</td>
<td>UPS25-60N</td>
</tr>
</tbody>
</table>
Wilo–Top–Z     Commercial sanitary hot water circulation pump

Design type
Glandless pump circulator with screwed connection or flange connection. Pre-selectable speed stages for power adjustment

Application
Domestic hot water circulation systems in industry and building services.

Type key
Example: Wilo–TOP–Z 40/7
- TOP: Standard pump (screw-end pump or flange-end pump)
- Z: Single pump for domestic hot water circulation
- 40: Nominal connection diameter
- 7: Nominal delivery head range [m] at Q = 0 m3/h

Special features/product advantages
- Manual power adjustment through 2-speed selector switch
- Inbuilt motor thermal protection
- Unique self venting design to ensure long-term operation
- All units supplied with bronze housing

Technical Data

<table>
<thead>
<tr>
<th>Permissible area of application</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible temperature range – Heating</td>
<td>n/a</td>
</tr>
<tr>
<td>Permissible temperature range – Drinking</td>
<td>TOP–Z 25/10 drinking water up to 3.57 mmol/l (20 dH): max. +80 °C, in short-term operation (2 h) up to +110 °C</td>
</tr>
<tr>
<td>Mains connection</td>
<td>1~230 V, 50 Hz</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP X4D</td>
</tr>
<tr>
<td>Screwed connection or flange connection</td>
<td>(depending on type) Rp ¾ to DN 80</td>
</tr>
<tr>
<td>Max. operating pressure, standard version</td>
<td>6/10 bar or 6 bar (special version: 10 bar or 16 bar)</td>
</tr>
</tbody>
</table>

Materials

- Pump housing: Red brass
- Impeller: Plastic
- Shaft: Stainless steel/ceramic (depending on type)
- Bearing: Carbon, synthetic resin impregnated
Operating modes

» Speed-stage switching

Manual functions

» Setting the speed stages: 3 speed stages

Automatic functions

» Internal protection against unacceptably high winding temperatures (only for pumps with P2 < 180 W, optional for all types with switchgears SK 602N and SK 622N).

Signal and display functions

» Thermal winding contact (WSK, potential-free NC contact) (only for pumps with P2 ≥ 180 W)
» Direction of rotation signal lamp (only for 3~ pumps)

Equipment

» For flange-end pumps: Flange versions
  » Special version for DN 40 to DN 80 pumps: PN 16 flange (according to EN 1092–2) for PN 16 counter flange,
» Cable inlet possible from both sides (only for 1~pumps and 3~pumps with P2≥180 W)
» Thermal insulation as standard

### Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe</th>
<th>Overall Length</th>
<th>Mains Connection</th>
<th>Max. Volume Flow</th>
<th>Max. Delivery Head</th>
<th>Thread</th>
<th>Rated Pressure</th>
<th>Grundfos Equivalent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP-Z 25/10-EM</td>
<td>1&quot;</td>
<td>180mm</td>
<td>1~ 230V 50 Hz</td>
<td>158</td>
<td>10 m</td>
<td>G 1½</td>
<td>10 bar</td>
<td>UPS25–80N</td>
</tr>
<tr>
<td>TOP-Z 30/7-EM</td>
<td>1 1/4&quot;</td>
<td>180mm</td>
<td>1~ 230V 50 Hz</td>
<td>118</td>
<td>5.5 m</td>
<td>G 2</td>
<td>10 bar</td>
<td>UPS32–100N</td>
</tr>
<tr>
<td>TOP-Z 30/10-EM</td>
<td>1 1/4&quot;</td>
<td>180mm</td>
<td>1~ 230V 50 Hz</td>
<td>158</td>
<td>10 m</td>
<td>G 2</td>
<td>10 bar</td>
<td>UPS32–100N</td>
</tr>
<tr>
<td>TOP-Z 40/7-EM</td>
<td>1 1/4&quot;</td>
<td>250mm</td>
<td>1~ 230V 50 Hz</td>
<td>270</td>
<td>10 m</td>
<td>DN 40</td>
<td>10 bar</td>
<td>UPS32–100N</td>
</tr>
</tbody>
</table>
Wilo-Dual Circulator Systems  
Commecially tailored and pre-packaged

Special features/product advantages
- S2R-3D Panel provides duty/standby operation with time activated changeover
- Volt-free contacts for collective run and collective fault signals for BMS connectivity
- Digital time clock with 7-Day program and 120 hours battery back-up
- Potential for external temperature and pressure sensors to be connected for further control functionality
- Wall mountable galvanised steel baseplate
- Metal weatherproof enclosures available to allow for outdoor installation

### Wilo-Dual Circulator Systems

<table>
<thead>
<tr>
<th>Type</th>
<th>Pipe Connection</th>
<th>Nominal Diameter</th>
<th>Mains Connection</th>
<th>Gross Weight</th>
<th>Stock Code</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manifold System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Dual PICO-Z 20/1-6</td>
<td>3/4”</td>
<td>20</td>
<td>1~ 230V 50 Hz</td>
<td>10.5</td>
<td>L</td>
<td>2996940</td>
</tr>
<tr>
<td>2 Dual Yonos MAXO-Z 25/0.5-10</td>
<td>1 5/8”</td>
<td>30</td>
<td>1~ 230V 50 Hz</td>
<td>30.5</td>
<td>L</td>
<td>2996941</td>
</tr>
</tbody>
</table>

### Wilo-Dual Circulator Systems Enclosures

<table>
<thead>
<tr>
<th>Type</th>
<th>Stock Code</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual PICO-Z 20/1-6-COVER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual Yonos MAXO-Z 25/0.5-10-COVER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>